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EPOCH-MAKING BOOKS IN BRITISH SURGERY

BY

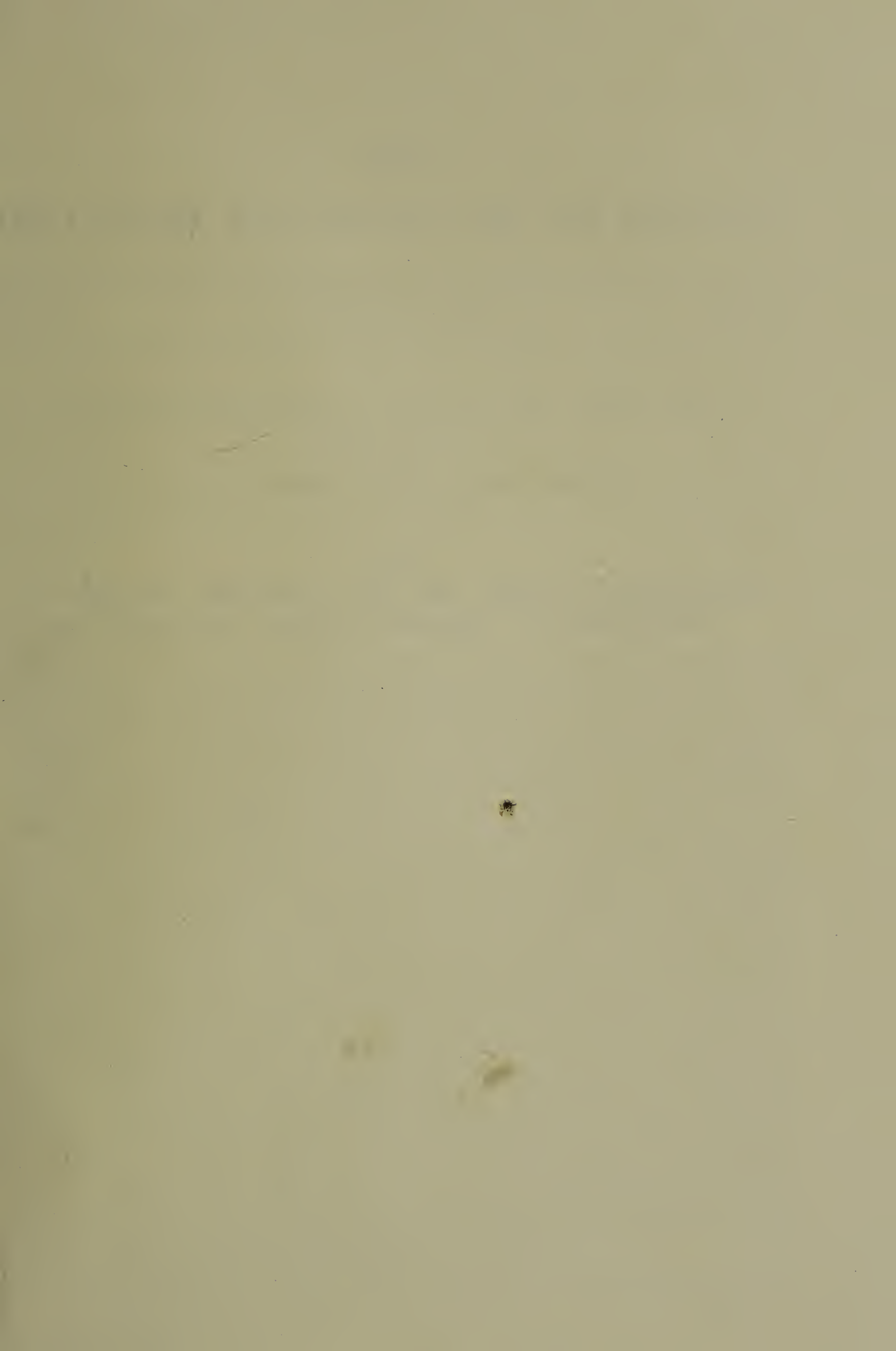
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CHIRURGIANS BY WILLIAM CLOWES
MAISTER IN CHIRURGERY

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BY SIR D'ARCY POWER, K.B.E., LONDON.

III.

A PROVED PRACTISE FOR ALL YOUNG CHIRURGIANS BY WILLIAM CLOWES MAISTER IN CHIRURGERY.

WILLIAM CLOWES the elder, for he had a son who was Serjeant Surgeon to King Charles I, was one of the most prolific surgical writers of his day. He was on good terms with his fellow-surgeons because he was honest in all his dealings, but he hated and was hated by the numerous quacks and unlicensed practitioners who abounded in London in the middle of the sixteenth century, and he made common cause with Gale, Hall, and Read to expose their misdeeds and to raise surgery to the dignity of a profession. The first act of the United Barber-Surgeons Company was to improve the surgical education of their apprentices and members. Examinations were instituted, Gale and Clowes made the examinations a reality and tried to improve the standard by writing treatises which correspond to our modern text-books. Both wrote in English, but the method adopted by Clowes was wholly different from that used by Gale. Clowes told in detail the particulars of cases which he had himself seen, and then set out the treatment he had adopted. He was a good surgeon, trained in the wars like Gale, but he had his limitations, at any rate according to modern views. He was too fond of ointments and plasters, and was especially proud of an oil of whelps (*Oleum catulorum*) which he had invented, though he does not explain why puppy dogs' fat was better than that of lard or suet. "The Proved Practice" was published in 1588, and it may therefore be looked upon as the third text-book of surgery published in English of which we have at present any certain knowledge—Arderne's works being the first; Gale's being the second. The treatise deals chiefly with gunshot wounds and similar injuries, but much incidental matter is introduced, and it is well worth reading for a picture of life in the times when it was written. Chapter 8 gives an account of the amputation of a "mortified and corrupt leg or arm" in the following words:—

"If it so fall out, or happen, that a leg is to be cut off beneath the knee,

let it be distant from the joint four inches, and three inches above the knee ; and so likewise in the arm as occasion is offered. These things being observed and noted, then through the assistance of Almighty God, you shall luckily establish this work by your good industry and diligence. But you must be very circumspect and careful of all things which concern the methodical perfection of this work, that is, you shall have a great regard to the state of his body as also for evacuation and dieting. And after his body is prepared and purged, then the same morning you do attempt to cut off the member, be it leg or arm, let him have two hours before some good comfortable caudle or other broth, according unto the discretion of the learned Physician or Chirurgion only to corroborate and strengthen his stomach. And in anywise omit not but that he have ministered unto him some good exhortation by the Minister or Preacher. And you shall advertise the friends of the patient that the work you go about is great and not without danger of death for that many accidents or syntomies [*perils*, says Arderne's commentator two hundred years earlier using the same word] do run and flock together unto such great wounds, which desperate evils in such causes will many times admit no cure. All which being considered, then ordain the night before some good defensive and let it be applied two or three times about the member.

“ All which being well considered you shall have in readiness a good strong form and a steady, and set the patient at the very end of it ; then shall there bestride the form behind him a man that is able to hold him fast by both his arms, which done, if the leg be to be taken off beneath the knee, let there be also another strong man appointed to bestride the leg that is to be taken off and he must hold fast the member above the place where the incision is to be made, very steadily without shaking, and he that doth so hold should have a large hand and a good grip, whose hand may the better stay the bleeding ; but in some bodies it will not be amiss to admit bleeding, specially in such bodies as are of hot complexions and do abound in blood. And I have known through the skilfulness of the holder not much above four ounces of blood lost at a time. But in weak bodies it may not be suffered to lose much blood, for blood is said to be the treasure of life, for which cause a good holder is not to be spared. In like manner there must be another skilful man that hath good experience and knowledge to hold the leg below, for the member must not be held too high for staying and choking of the saw, neither must he hold down his hand too low for fear of fracturing the bones in the time it is a sawing off, and he that doth cut off the member must be sure to have a sharp saw, a very good catlin and an incision knife, and then boldly with a steady and quick hand cut the flesh round about to the bones without staying, being sure that the Periosteum or Panicle that covereth the bones be also incised & cut with the nerve that runneth between the two bones of the leg which shall be done with your incision knife. All this being orderly performed, then set your saw as near the sound flesh as easily you may not touching it, and with a light hand speedily saw it off. Then take of (a restrictive) powder as much as will serve your turn and mix with the said powder *Pilorum leporis torrefact. & ovorum albumin ana quantum sufficet* and let the Hare hairs, I say, be cut as fine as possible may be, so much as will bring it all to a reasonable thickness, and when the

powder is thus prepared, before you cut off the member, let there be in like manner made for the purpose three or four small bolsters or buttons fashioned in the top or upper part like a Dove's egg or as a sugar-loaf button flat in the bottom to the compass of a French Crown, and round upwards as aforesaid and these you shall make of fine Tow according to art wrought up in water and vinegar, whereupon you shall supply some part of the restrictive. And when the holder of the member above doth partly release the fast holding of his hand by little and little by which means you may the better perceive & see the mouths of the veins that are incised and cut, you shall place the round ends of these three or four small buttons and upon them presently, without tarrying, place a round thick bed of tow made up in water and vinegar so that it be fit, as near as you can guess it, to the compass of the stump or member that is taken off and thereon spread of the restrictive and upon that you shall lay another broader bed of tow made up as aforesaid, so large that it may compass the member over . . . and you shall tie on the large bed of tow, being cut first with a pair of Scissors in four parts thereof, one cut right over against another, an inch long and somewhat more, that the said bed may be bound to with the more ease. And you shall tie the large bed to, as I said, with a ligature, which they call a chokeband, doubled two or three times, being flat and fully an inch broad and a yard long, and you shall place upon these a double large bed of soft linen cloth and then with a strong roller of four inches broad and three or four yards long let it be artificially rolled and where as the blood beginneth to shew through all, in that place you shall specially lay a good compressor or thick bolster made of tow wrought up in water and vinegar the thickness almost of a man's hand and thin towards the edges and in compass of a Philip's dollar more or less, as you suppose the greatness of the flux to be, and couch them close to in as many places as the blood doth show itself and thus, with three or four rollers and as many soft linen beds some single and some double with sufficient number of bolsters, some great and some small, you shall artificially stay the flux of blood; which order and way did yet never fail me, nor any other that have used the same according unto the order here prescribed. Some also do use to draw over the great bed of tow a wet Ox bladder and pulleth it close up over the same, the which they tie fast to with the aforesaid ligature or chokeband. All which being orderly done then you shall easily as possible may be, carry the patient to his bed, having a pillow made ready to rest the member on. Thus let him lie with as much quietness as may be, keeping a convenient diet; then the third or fourth day you shall have in readiness stupes of white wine with a recent roller, &c." The parts may be burnt with a bright cauterizing iron which, says Clowes, "is most excellent but that it is offensive to the eye and bringeth the patient to great sorrow and dread of the burning and smart." Master Gale's powder may be used, "which powder of his was a worthy invention and better pleased the patients than the burning irons which were, I say, very offensive unto the eye and yet the powder wrought with extreme pain and made a very great eschar & by that means the bones afterwards hath been cut off new again, as I have seen many times within the Hospital of St. Bartholomew's and so did make a very long work or ever they were cured." He invented, therefore,



THE SURGEON'S CHEST FROM THE 1588 EDITION OF CLOWES' SURGERY.

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Observations for



THE SURGEON'S CHEST FROM THE 1596 EDITION OF CLOWES' SURGERY.

a powder which had not these disadvantages, “the which I did put first in practice in the hospital of St. Bartholomew’s, as it is well known unto some of the Surgions that then served there, and yet live within this City of London, who were present with me when I first put it in practice, at which time there was taken off in one morning seven legs and arms and so, by God’s assistance, we stayed all their fluxes of blood without any pain unto them but only in the compression and close rolling and tenderness of the wound excepted. Not many days after the worshipful Maisters of the said Hospital requested me with the rest of the Surgians to go to Highgate to take off a maid’s leg, which they had seen in the visitation of those poor houses. The said leg was so grievously corrupted that we were driven upon necessity to cut it off above the knee, which we did perform by this order here above prescribed, and we stayed the flux and lost not much above four ounces of blood and so cured her after within a very short time.”

Clowes sometimes ventured on more serious operations. For instance, “There did come unto me to be cured a Gunner of a ship which was dangerously wounded in the lower region of his belly so that a great part of the Zirbus or Omentum did come out of the wound and also some of the intestines proffered themselves to come forth likewise; but the patient did keep all very close and well till he came unto me. Then I caused him to lie down on a bed upon his back and, after search made, I found the guts safe and not touched of the weapon; then with a strong doubled thread I did tie fast the Zirbus, as close unto the wound as possibly well I might, and then a finger breadth or thereabouts I did cut off that part of the Zirb that hanged out of the wound, and so I cauterised it with a hot iron almost to the knot. All this being done I put again into the body that part of the Zirb which I had fast tied and I left the piece of the thread hanging out of the wound, which within four or five days after nature did cast forth. The thread, as I say, being fast tied, then presently I did take a needle with a double strong silk thread well waxed, wherewith I did thrust through both Mirach [the abdominal wall] and Siphac [the peritoneum] on the right side of the wound, but on the left side of the wound I did put the needle but through Mirach only. . . . Thus with good bolstering and rolling he rested till the second day. Ye shall understand that immediately after he did complain of the grudging of an Ague and being therewith somewhat distempered, presently there was opened a vein and forthwith a gentle mollifying Clyster also. Then, shortly after his bleeding and purging, he mended again and by this means his fever was prevented. Thus in foreshowing of the evils that happened in this cure you may the easilier shun the dangers in others.” Also in 1580 there was one, William Mouch, “a serving man who received a wound in his belly and the Zirb issued out of the wound so broad in compass that it did very easily cover a great square trencher, which was cured likewise with the order and remedies afore rehearsed. Moreover in Anno 1586 a little girl of the age of ten or twelve years was also wounded in the belly with a knife that she carried in her hand, so that the Zirb did come forth of the wound the compass of a man’s hand, she being then in the country seven miles from London. I did not use any cauteries unto this girl neither yet unto the serving man. The reason partly was for that neither the patients nor their friends

would willingly hear of the hot irons although it were said to be a safe and sure way. Neither did I find any diseommodity for not using them, which girl was afterwards brought to London whom I likewise did cure in a very short time; for the which the name of God be praised."

There is also the interesting "cure of a man which received a notable wound in his head with great fraeture of the skull and did moreover fraeture the bone of the thigh ealled Os Femoris, by a fall out of a gallery in the Bear Garden, at that time when the Bear Garden did fall down and did kill and hurt many." Clowes operated immediately, shaved the head, put his finger into the wound, found a fraeture, enlarged the wound and could do no more because of the bleeding. He therefore plugged the wound and put on a bandage. Then "I caused them to hang all his chamber round about with eoverlets and other hangings and made it very dark and without any light or air but only by a eandle because in this case air is very hurtful. Then at the seëond dressing, after I had opened the wound and taken away all things wherewith the wound was filled for the restraining of the blood I caused two strong men steadfastly to stay his head with their hands; and having stopped his ears with wool then I did set on a trepan and so pierced the skull through both the tables in two places and then with an instrument called a Levatory, I raised up the depressed bone with great care and diligence for fear of procuring further accidents, which being done presently his speech amended. And upon Dura mater I found a good quantity of congealed blood which presently I removed for fear of pain and inflammation. After the blood with speed was taken away there was also very apparent to be seen a certain blackness upon Dura mater for the which cause I did put between Dura mater and the skull a fine pieee of Lawn dipped in Melle Rosarum. And there was good flesh brought upon Dura mater and the fractured bones being so loosed and borne up and in the place of these bones Nature supplied and ordained a good and perfect callus. And thus he was shortly after well and perfectly cured and made whole of the said wound of his head."

There is also an excellent account of a stout fellow who received a sword thrust through his sternum, the point of the sword coming out at his back. Clowes told those that were present that he greatly feared there was no way of cure, "and so in truth I refused to dress him supposing that he would die under my hand. Then the wounded man desired me as ever I loved a man that I would dress him and take him in cure; for (said he) my heart is good although my wound be great." Clowes cured him, and five years after he had been made whole "he did come to London partly to see me and to give thanks and did show the place that was wounded both where the sword went in and where it did come forth."

The illustration of "The Surgeon's Chest" is reproduced from the 1588 edition. It appears again in the 1591 edition, but in that of 1596 it has been re-engraved, reversed, and materially altered. The Arms of the Earl of Warwick are replaced by the Royal Arms with E. R. on each side. In place of the Stretcher panel there is a view of London showing Old St. Paul's and a ship sailing on the Thames. The bottles in the Chest have been provided with stoppers, and the smaller chest standing by its side has been removed.

